

Claims

1. A fuel supply system comprising a pump for raising the pressure of and supplying supply fuel and a fuel pressure regulating valve disposed at a fuel outlet side of the pump in order to regulate the pressure of the fuel supplied from the pump to a predetermined pressure, wherein the fuel pressure regulating valve includes a cylinder in which a piston is housed, the piston is elastically urged by an elastic urging mechanism toward a pressure receiving port of the cylinder, the piston is configured such that the pressure of the fuel is regulated as a result of the piston opening/closing an overflow port disposed in a side wall portion of the cylinder in response to the fuel pressure in the pressure receiving port, and a lubrication fuel outlet port for taking out fuel for lubrication is disposed in the side wall portion of the cylinder at a position nearer to the pressure receiving port than the overflow port.

2. The fuel supply system of claim 1, wherein the elastic urging mechanism comprises a single elastic urging member.

3. The fuel supply system of claim 1, wherein the elastic urging mechanism comprises plural elastic urging members that are serially disposed and have different spring constants, and

is disposed with a piston stroke characteristic including different plural piston stroke characteristic portions.

4. The fuel supply system of claim 1, 2, or 3, wherein an escape hole for allowing back pressure of the piston to escape to a fuel low-pressure side is disposed in the side wall portion of the cylinder.